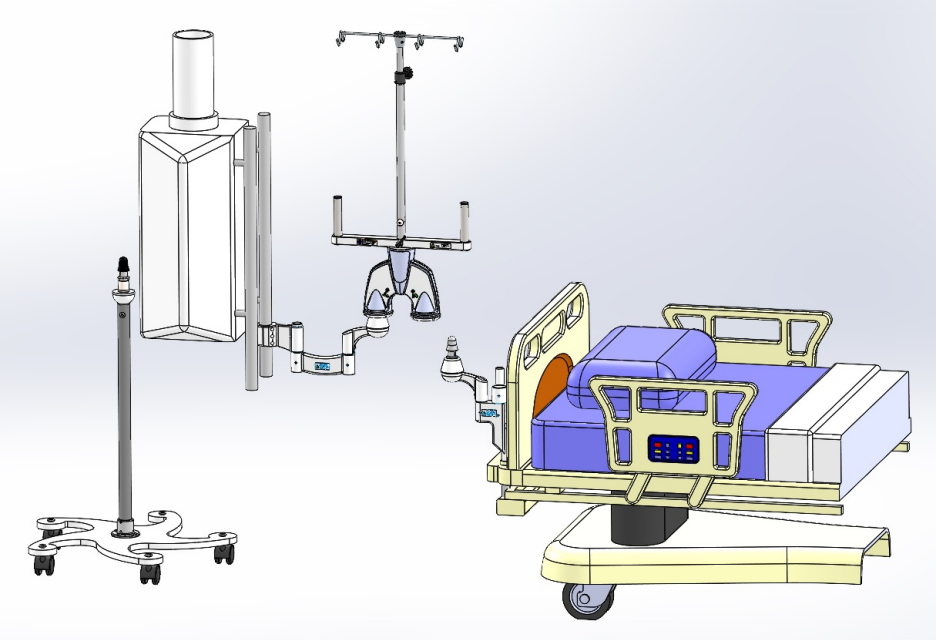
# TAD™ Operations And Maintenance



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17-80-1035-002 Rev 2

# TAD™

# Operational and Maintenance Manual

For Model # TAD 5.0

## SAFETY INFORMATION (Section 1.0)

**We take everyone's safety seriously including equipment users and patients.**

Important safety messages are incorporated throughout this manual. Always read, understand, and obey these messages.

This is the safety alert symbol. This symbol alerts you to potential hazards that can kill or hurt you and others. Safety messages following the safety alert symbol use the word "DANGER," "WARNING," or "CAUTION." These words mean


Death or serious injury **will** result if you don't fully comply with these instructions.


Death or serious injury **may** result if you don't fully comply with these instructions.


Minor or moderate injuries **may** result if you don't follow these instructions.

## SYSTEM OVERVIEW (Section 2.0)

2.1 TAD by Nexxspan Healthcare, LLC is an Equipment Transfer system for safely and efficiently transferring equipment such as infusion pumps and other Pole mounted devices from a temporary support (such as a hospital bed) to a stationary support on a wall, column, or boom. The TAD system also provides for temporary docking of pole-mounted devices to a transfer stand during special procedures such as X-Rays, CAT Scans, or MRIs. Except for the instructions given herein, the transfer of the Equipment Pole and items attached to it is achieved by using the bed control to raise and lower the bed. While not in transport the TAD Equipment rack is intended to be stored on the wall, column or boom and not on the bed or mobile docking station. However, in facilities where a wall, column or boom platform is not utilized, it is highly recommended that the hospital store the TAD on the docking station in the room. The hospital should establish its own protocol as it relates to the TAD.

2.2 The TAD™ system consists of four (4) primary components (see illustrations on pages 5 & 6):

1. **TAD** (**Component 1**) – The TAD Equipment Transfer Unit, the heart of the TAD system, incorporates two inverted ***receiving cups*** into which ***docking cones*** are inserted and automatically latch. The TAD unit is always supported on a single docking cone. These cones are integral with the bed arm, boom arm, and the mobile docking station. The internal design of the TAD unit facilitates safe and efficient transfers from one to another without the need for strenuous human intervention. This allows transfers of infusion equipment between bed and boom, or between the bed and the docking station. There is a visual docking indicator to assist with safe transfer (see section 3.8) The TAD unit includes an Equipment Rack with a single pole with a 15” extension.

2. **Boom Arm** (**Component 2)** - When the TAD unit is located on a boom it is supported on a docking cone integral with the Boom Arm and engages one of the TAD unit's receiving cups. Using the elevation capability of a patient bed, the TAD unit may be lifted off this cone (or deposited on it) by raising (or lowering) the bed. Interlocks engage and disengage automatically so users don’t need to remember to manually open or close locks. However, the user should test the engagement by slightly lifting on TAD. This is demonstrated in the TAD video found at https://nexxspan.com/tad_training_video/. The Boom Arm can be articulated so its cone can be positioned optimally whether for transfer or stowage after use. Attachment of the boom arm to the boom is typically via a 38mm pole clamp or similar method.

3. **Bed Arm** (**Component 3A, 3B, 3C, or 3D)** – When the TAD unit is located on a bed it is supported on a docking cone (integral with the Bed Arm), which engages one of the TAD unit's receiving cups. The Bed Arm cone supports the TAD unit during patient transport. Using the elevation function of the bed, the TAD unit may be captured on the Bed Arm cone (or lifted off it) by lowering (or raising) the bed. Internal latches engage and disengage automatically, and the TAD visual docking indicator confirms to the user that the internal latch is engaged or disengaged. The user should test the engagement by slight lifting on TAD. Bed Arm may be articulated so the TAD unit can be positioned optimally during transfer, transport, or stowed afterward. Bed Arm adapters for most popular beds are available.

4. **Mobile Docking Station** (**Component 4**) – The mobile docking station permits a TAD unit to be strategically positioned in locations where a boom arm or bed arm cannot be used. This mode of operation is most frequently used in special

procedure or imaging areas. The wheels on the docking station have locks, which allows for minimal movement when engaged.

## SYSTEM OVERVIEW (Section 2.0) [ILLUSTRATIONS]

TAD Unit
IV Rack
**Component 1**

Boom Arm
**Component 2**

Docking Cone

Mobile Docking Station
**Component 4**

Hill-Rom TotalCare™

Bed Arm **(Component 3)**

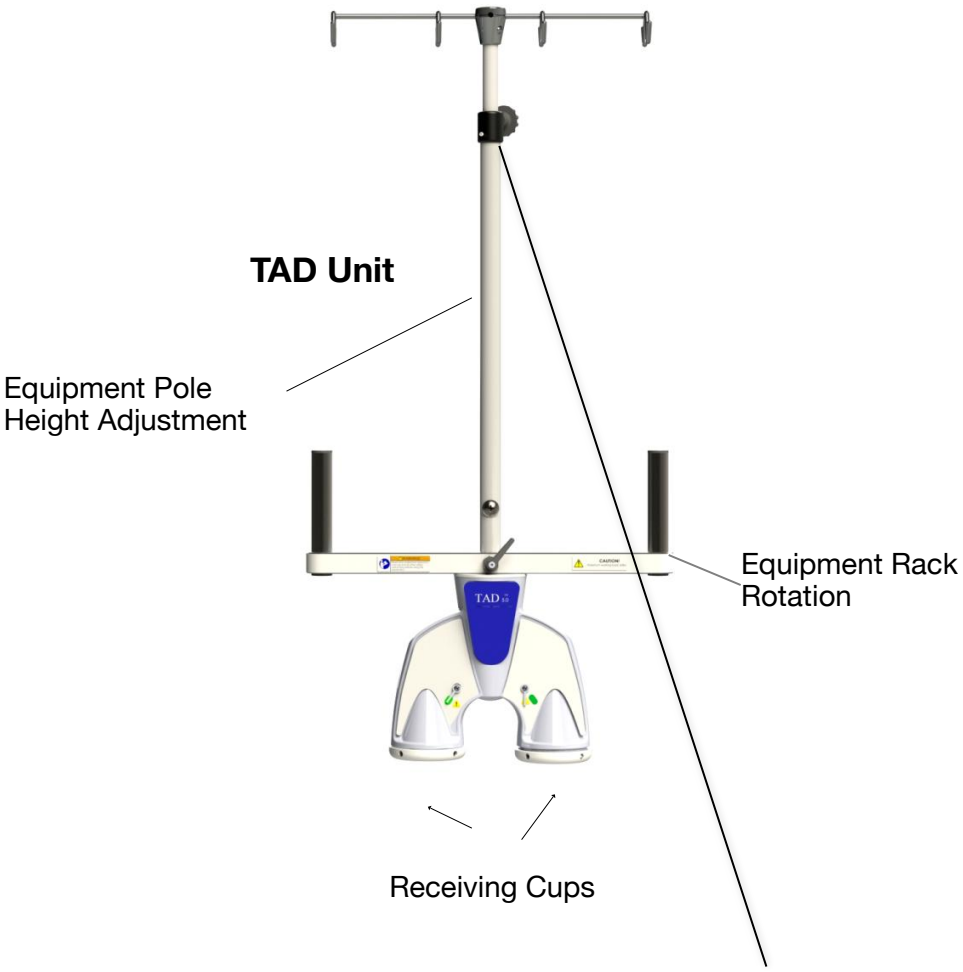
Stryker InTouch™

Stryker Epic™

Hill-Rom Progressa™

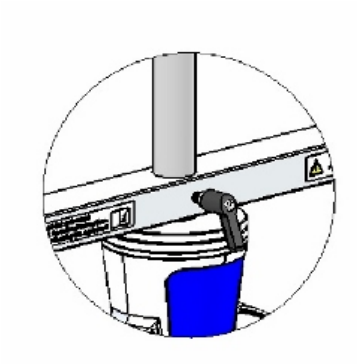
## SYSTEM OVERVIEW (Section 2.0) [ILLUSTRATIONS, Cont.]

Detailed Features of the TAD Unit and Equipment Rack




The Equipment Pole can be raised to a maximum height of approximately 29 inches. The pole can be secured at any position by turning the round black knob clockwise. When lowering the pole its weight must be manually supported until secured by the knob at its desired height.



Equipment Rack rotational tension can be increased or decreased by turning the black handle clockwise or counterclockwise. Only very slight movement (approx. ¼ turn) is typically needed. By pulling outward on the handle it can be oriented without changing the tension setting. **DO NOT REMOVE THIS HANDLE**

## SYSTEM OPERATION (Section 3.0)

Before attempting to operate TAD, read and thoroughly familiarize yourself with ALL the information in this publication, paying particular attention to those elements that contain safety messages or information. For purposes of these instructions, two key words must be defined and understood. **Transfer** refers to a process that results in the repositioning of TAD component, which is the unit as described in the previous illustration, from one mounting position to another (such as from a wall mount to a bed mount). **Transport** refers to the process of moving an occupied bed (along with an intact equipment arrangement) from one part of the hospital facility to another.

**⚠ WARNING**

**DEATH OR SERIOUS INJURY MAY RESULT IF INSTRUCTIONS ARE NOT COMPLETELY FOLLOWED**

Ensure Transfer Operators are deemed qualified by the responsible organizational entity.

Strictly observe all facility protocols during patient transport. The instructions contained in this document are intended only as a supplement, NOT as a substitute for facility protocol & training.

Do not overload the IV Rack (62 pounds **total** working load includes load on hooks @ 10 pounds max.) The 62-pound limit may be reduced by the actual weight of an O2 tank *when mounted on the same side of the bed*.

The Transfer Operator should always ensure that the TAD unit is firmly and fully seated and latched onto the receiving cone (NOTE: It is normal for the equipment tree to lean *slightly* toward the load).

Pumps and similar items should ALWAYS be attached to the center pole first. In cases where the outer poles must be used, it is imperative that the load be balanced as much as possible. LOWER IS ALWAYS BETTER!

Always ensure the bed and the Bed Arm are level prior to attempting an IV transfer (**to** or **from** the bed). Never adjust the bed angle during a transfer.

Ensure there is adequate *space* for Receiving Cup & Docking Cone to self-align during a transfer.

Check visual docking indicator pointer during and at the completion of transfer. There are two pointers and one will point to green to indicate which cup is locked and one will point to red to indicate which cup is unlocked.

Transfers are intended to be smooth, effortless, and silent. Any situation or transfer event that departs from this norm is suspect and should be aborted in favor of a manual transfer of the IV equipment.

The Transfer Operator must be able to clearly see the TAD Unit and all its ancillary equipment during a transfer.

The Transfer Operator must be constantly vigilant for situations that could pinch, kink, puncture, or in any way disrupt any patient connections. This potential hazard is most prevalent during the actual **transfer** and/or **transport** process.

The operator must be aware that the TAD System can increase the bed's footprint and ensure that no portion of the TAD system impacts, hangs, or snags walls, doors, door frames, door handles and/or overhead obstacles. **LOWER IS ALWAYS BETTER**!

Transfer Operators must follow the steps below in order to safely accomplish an IV transfer and patient transport. The general warnings on the previous page apply before, during, and after a transfer. These instructions are written specifically for and directly to Transfer Operators.


3.1 Lower the pole(s) on the Equipment Racks to the lowest possible position to avoid any overhead interference during patient transport. Adjust the Equipment Rack rotation tensioning handle to prevent unnecessary Equipment Rack rotation during bed movements (see Section 2.0).


3.2 Ensure the Equipment Rack is evenly loaded/balanced so there is a minimum amount of leaning is evident on the vertical poles. Ensure all items are securely attached and/or stowed.


3.3 Position the Receiving Cup directly above the Docking Cone to which the Equipment Rack is to be transferred. Also, ensure that adequate *space* is available for the Bed Arm and/or Boom Arm to self-align. This may require movement of the bed and/or the TAD unit to roughly align the cup and the cone.


3.4 Ensure the bed frame is level before attempting to make a transfer. Some beds have auto-level features; others may be leveled by lowering the bed to its lowest position (consult bed operating instructions for specifics). The TAD Unit is designed to accommodate about 3 degrees of bed frame incline so a visual check for a misaligned bed and/or bed adapter is essential.

**WARNING**

3.5 Position yourself so the TAD unit can be observed during all transfer operations. Be vigilant for any condition that would signal a need to pause or terminate the transfer process. This would include any interference with other equipment, fouled lines or cords, misaligned TAD components or sounds that are atypical of a clean and safe transfer.

**WARNING**

3.6 Observe all facility protocols during bed and patient movement.

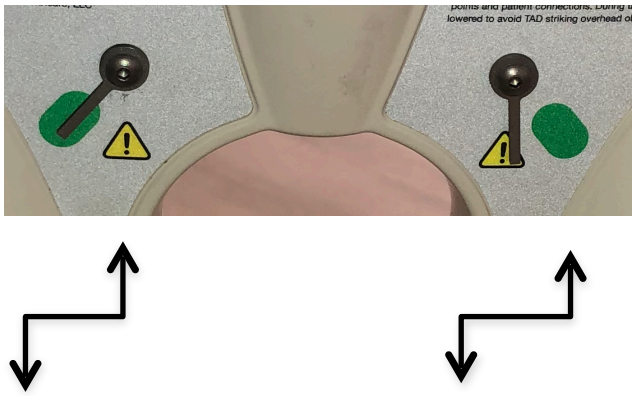
**WARNING**

3.7 Make TAD unit and receiving cones parallel.

Raise or lower the bed slowly so that the Receiving Cup *accepts* the Docking Cone into place. Continue to raise or lower the bed until the other Receiving Cup and Docking Cone are completely separated and will *clear* one another vertically.

**WARNING**

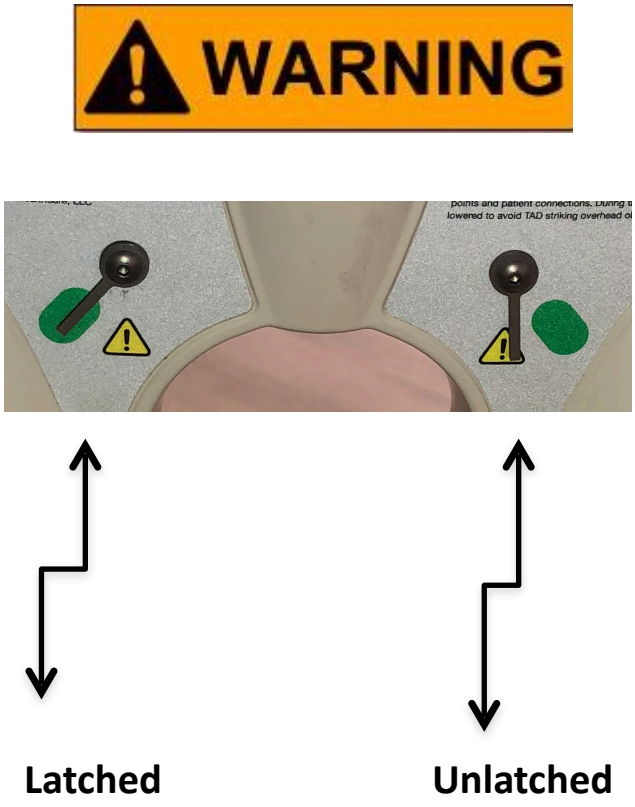
3.8 Visually ensure the TAD Unit is fully, firmly, and evenly situated on the receiving cone. The docking indicator should point to GREEN on the receiving cone. See below figure. At this point, a *slight* lean toward the load is normal. Grasp the center pole of the TAD Unit and gently push it to or beyond a vertical position and then let it come back to its slightly leaning position.



3.9 If TAD pointer does not move from **YELLOW CAUTION** to **GREEN GO** during the preceeding steps. Immediately stop transfer and notifiy unit manager. See below figure.

Immediately report any suspect equipment to the designated personnel. This would include units, which make unusual sounds during transfers, fail to latch, fail to unlatch, stick or snap during a transfer, or in any way behave erratically or in an unusual manner. Units suspected of being defective for any reason must be immediately removed from service according to facility protocols.



## SYSTEM MAINTENANCE (Section 4.0)

4.1 There are no user serviceable parts in the TAD System. Note: There are replacement items that can be ordered from Nexxspan and replaced in the field with special guidance from our Customer Service experts or by a previously trained hospital personal. Call at any time if there is a problem.

4.2 Due to the critical role which TAD plays in patient transport, it is recommended that a monthly PM/inspection be pulled on all components. In particular, this PM should look for any evidence of excessive wear, loose, broken, and/or bent parts. If at any time (now or in the future) Nexxspan determines that specific inspections are required, the user must agree to perform these inspections in accordance with the instructions given.

4.3 All components of the system should be cleaned periodically using mild cleaning agents. Disinfectants may also be used as required by local protocols. Extended exposure to Oxivir™, Virex™, Lysol™, Isopropyl alcohol, and 409™ has not had deleterious effects on the TAD System.

4.4 DO NOT immerse the TAD unit in any liquid or pour quid into the unit while in an inverted position. The unit is designed to withstand liquid spills while in its upright position, but deliberate introduction of liquids into the unit in its inverted position could harm the unit or even render it inoperative.


4.5 All user complaints are serious. TAD is a robust system that is designed to enable the user to make effortless and safe transfers. However, if there is any report of unusual sounds, hanging, unusual system lean, failure to latch, failure to unlatch, too tight or too loose movements of arms and cones, etc., immediately investigate and remove the unit(s) from service. Seek assistance from Nexxspan to diagnose and correct any and all issues.

4.6 All questions that extend beyond the scope of these instructions should be directed to Nexxspan Healthcare, LLC (contact information on the front of this document).